

Pulse

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DuPage County Health Department

Winter 2009

The purpose of this two-page surveillance update is to promote the control and prevention of disease, disability, and premature death, as well as to monitor and improve our community health status, by providing clinically relevant information and resources to healthcare professionals in DuPage County.

Oral Health

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Mouth and throat diseases, which range from cavities to cancer, cause pain and disability for millions of Americans each year, yet almost all oral diseases are largely preventable.¹ There are threats to oral health across the lifespan, and nearly one-third of all adults in the U.S. have untreated tooth decay. One in seven adults aged 35 to 44 years has periodontal (gum) disease; this increases to one in every four adults aged 65 years and older.²

Recent studies point to associations between oral infections—primarily gum infections—and various medical conditions, including diabetes, heart disease, stroke, and preterm, low-weight births. To date, there is not enough evidence to conclude that oral infections cause these serious health problems; research is under way to determine if the associations are causal or coincidental.²

Tooth decay (dental caries, or cavities) remains a common chronic condition that becomes more prevalent with age. Tooth decay also affects children in the U.S. more than any other chronic infectious disease. Untreated tooth decay causes pain and infections that may lead to difficulty eating, speaking, playing, and learning.² Fortunately, tooth decay and other oral diseases that can affect children are preventable. The combination of dental sealants and fluoride has the potential to nearly eliminate tooth decay in school-age children.²

Since medical professionals may have more contact with children than dentists, especially in the infant and toddler years, the American Academy of Pediatrics (AAP) recently released a policy statement addressing Preventive Oral Health Intervention for Pediatricians.³ These guidelines, designed to improve oral health outcomes for all children, provide primary care pediatric practitioners with clinical background information and recommendations including periodic oral health risk assessments, dietary counseling, administration of various fluoride modalities, and establishment of a dental home by one year of age, facilitated by collaborative relationships with local dentists.³

In observance of National Children's Dental Health Month in February, we invite Mila Tsagalis, R.D.H., M.P.H., Dental Health Services Program Manager at the DuPage County Health Department, to provide a guest editorial for our Winter 2009 issue.⁴

References:

1. www.thecommunityguide.org/oral/caries.html
2. www.cdc.gov/OralHealth/index.htm
3. aappolicy.aappublications.org/cgi/reprint/pediatrics;122/6/1387.pdf
4. www.ada.org/prof/events/featured/ncdhl.asp

Why is Childhood Caries Prevention Important?

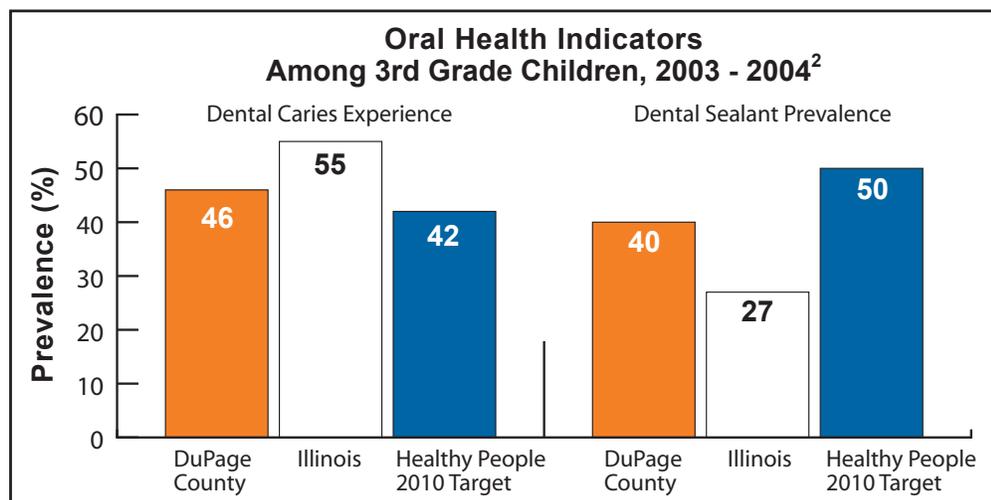
Mila Tsagalis, RDH, MPH
Program Manager, Dental Health Services
DuPage County Health Department

Since 1949, February has been designated National Children's Dental Health Month to raise awareness about the importance of oral health. The American Dental Association, local dental societies, and community health organizations support oral health initiatives geared toward children and oral health. More recently, the American Dental Association has sponsored an initiative called Give Kids A Smile Day each February, specifically addressing access to dental care for underserved children. Both efforts have increased awareness of how important dental care is for children, particularly for those at risk. Dental caries (tooth decay) is a common chronic disease that causes pain and disability across all age groups. If left untreated, dental caries in children and adults can lead to pain and infection, tooth loss, and edentulism (total tooth loss).

In Illinois, great strides have been made to address oral health issues statewide. Priorities have been determined through coalition building and community efforts. The result is the Illinois Oral

Health Plan II: A Roadmap to the Future, published in Spring 2007.¹ The Plan provides a framework of six policy goals with recommendations for statewide growth. An extensive amount of the goals and recommendations are focused on children. The remaining goals support research, increasing access to care for special populations and further exploration of possible associations between oral health and systemic disease (e.g., links between periodontal disease and preterm/low birth weight babies, periodontal disease and diabetes). These relationships are of interest to health professionals from all disciplines. Research in this area remains active, with findings eagerly anticipated.

In DuPage County, a wide variety of oral health services are available to residents. Services to children include school-based prevention programs, such as the Fluoride Mouthrinse and Dental Sealant Programs. The Mouthrinse Program is provided free of charge to all schools in the County; currently over 5,000 children rinse weekly. The Dental Sealant Program provides



RESOURCES

**DuPage County Health
Department
Oral Health Services**
(630) 682-7979, ext. 7776
[www.dupagehealth.org/services/
dental_srv.html](http://www.dupagehealth.org/services/dental_srv.html)

**Illinois Department
of Public Health
Division of Oral Health**
[www.idph.state.il.us/HealthWellness/
oralhlth/home.htm](http://www.idph.state.il.us/HealthWellness/oralhlth/home.htm)

IFLOSS Statewide Coalition
www.ifloss.org

CDC, Division of Oral Health
[http://www.cdc.gov/OralHealth/in
dex.htm](http://www.cdc.gov/OralHealth/index.htm)

American Dental Association
www.ada.org

**American Academy
of Pediatrics
Oral Health Initiative**
[http://www.aap.org/commpeds/d
ochs/oralhealth/](http://www.aap.org/commpeds/dochs/oralhealth/)

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Childhood Caries

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exams, cleanings, fluoride treatments and sealants to eligible children. Dental sealants--a plastic coating applied to the chewing surfaces of the back teeth--are a safe, effective way to prevent cavities among schoolchildren. In the 2007/2008 school year, over 5,000 children (ages 3 to 12 years) were served by this program, targeting schools with $\geq 20\%$ low-income population. Both the Dental Sealant Program and Fluoride Mouthrinse Program were started with funding provide by the Illinois Department of Public Health (IDPH). One of the primary objectives of the sealant program is to reach the Healthy People

2010 objective of providing 50% of children with dental sealants. In 2004, IDPH surveyed a random sample of 101 elementary schools in Illinois, including eight schools in DuPage County.² Preliminary survey analysis demonstrated a 40% sealant prevalence among DuPage County third grade students, with a statewide prevalence of 27%.

Oral health information was also collected on dental caries experience, or tooth decay (treated and untreated), in the same population. DuPage data showed 46% of third grade students surveyed had dental caries experience, with 55% in Illinois; the Healthy People 2010 target is 42%. Given our expanded outreach efforts, we hope to see an increase over time in our outcomes of children with dental sealants, and ultimately lower caries experience, in DuPage County.

Early Childhood Caries (ECC), previously known as Baby Bottle Mouth or Nursing Bottle Caries, remains a large problem for at-risk children nationwide. The term Nursing Bottle Caries or Baby Bottle Mouth has been replaced, because it may be misleading. ECC is not caused by feeding habits alone, but by a combination of feeding habits, oral hygiene habits, and the presence of a cariogenic bacterium (e.g., *Streptococcus mutans*). The disease process may begin with the introduction of cariogenic bacteria in the child's mouth, which allows for the production of erosive acids

when carbohydrates are consumed. Once a tooth is present and the bacteria have been introduced, the child is at risk for decay. Mothers and caregivers must be careful not to transmit the bacteria to the child, by avoiding shared utensils, drinking containers, and other saliva-sharing activities, such as tasting food before feeding, sharing toothbrushes, etc. Feeding and oral hygiene practices become increasingly important to prevent develop-

ment of caries. Children suffering with ECC may be at increased risk of speech and nutritional problems. Difficulty sleeping and other behavioral problems resulting from chronic pain caused by ECC can be a source of concern and frustration for many children and parents.

Because ECC may be infectious and can quickly progress, the disease should be treated in a timely manner. Treatment options may be contingent upon access to the specialized care required and the significant costs associated with treatment. Estimated Medicaid costs to treat the disease range from \$1,500 - \$2,000 per child.

Prevention: Health professionals can make a difference by educating prenatal patients, parents, and caregivers of infants and children. Early referral to the dentist is also important. The American Academy of Pediatric Dentists and the American Academy of Pediatrics recommend the first dental visit at six months of age for children at high risk of tooth decay. Oral health screenings will provide parental education and a general examination of the teeth, gums and mouth. Many community dental clinics will provide an in-office fluoride treatment 2-3 times per year for children at risk for caries. The fluoride varnish can be used in young children as a prevention tool in addition to evaluation and care by an oral health professional.

References:

1. www.ifloss.org/OralHealth/plan2.html
2. Illinois Department of Public Health: Healthy Smile Healthy Growth 2003-2004; [www.idph.state.il.us/HealthWellness/oralhlth/
HealthySmiles.pdf](http://www.idph.state.il.us/HealthWellness/oralhlth/HealthySmiles.pdf)
3. www.mchoralhealth.org/PDFs/ECCFactSheet.pdf

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Early Childhood Caries³



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